

**KODIAK MINING COMPANY, LLC
COKE MINE NO. 1, P-3887, R-5**

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ALABAMA SURFACE MINING COMMISSION
SURFACE MINING PERMIT APPLICATION

P A R T I I I

Prepared by:

MCGEHEE ENGINEERING CORP.

P. O. Box 3431
450 19th Street West
Jasper, Alabama 35502-3431
Telephone (205) 221-0686

PART III - OPERATION PLAN

A. General Operation Information

1. Describe the type and method of coal mining procedures and major equipment to be used. (780.11)

See Attachment III-A-1

Backhoes	Service Trucks	Off Road Haulers
Bulk Anfo Trucks	Dozers	Track Backhoes
Loaders	Drills	Continuous Miners
Roof Bolting Machines	Coal Cutting Machines	Compactors
Coal Scoops	Radial Sacker(s)	Rotary Screen(s)
Wet Screens	Heavy Media	Separators
Cyclones	Centrifuges	Conveyors
Pumps	Fans	Scrapers

2. Describe the sequence and timing of increments to be mined (as shown on permit map) over the total life of the permit. (780.11)

See attached [Permit Map](#)

The timing increments are as follows:

<u>Increment No.</u>	<u>Acres</u>	<u>Dates</u>	<u>To</u>
		From	
1	159.0	R-4 Effective Date	12 Months After
2	59.0	R-4 Effective Date	12 Months After
3	437.0	When Needed	12 Months After
4	15.0	When Needed	12 Months After
5	40.0	When Needed	12 Months After

* The Effective Date depends on the date of issuance of permit.

OPERATION PLAN

Revision R-5 proposes to add an existing abandoned underground mine on the Upper Thompson Seam in Increment No. 5. The room and pillar method of underground mining will be used at the Upper Thompson underground mine. Mining will begin by reopening the 5 existing entries created under P-3663 and disposing of the material in the proposed Coarse Refuse Disposal Area No.5. Any concrete, steel, etc, man-made materials will be hauled to a Federal or State Approved Landfill for disposal. The reactivated mine entries faceup are located in the SW 1/4 of the NW 1/4 of Section 28, Township 21 South, Range 4 West, as shown on the [Permit Map](#).

After the initial reopening and mine mains re-habilitation work required by MSHA is completed, mining operations will advance in a south easterly direction using a 5 entry mining system for advancement to the southeast as shown on the Operations Map. As fresh air is supplied continuously across the working faces, a combination of mining, roof bolting and timbering will be used to extract the coal safely. The main entries and cross cuts will be spaced on 60 foot centers and will be 20 feet wide. Pillars within the main entries will be 40 feet wide by 40 feet long. Panel entries of 20 foot width will be driven on 60 foot centers with cross cuts of 20 foot width also occurring on 60 foot centers creating pillars with dimensions of 40 feet by 40 feet. No pillar recovery is planned therefore these permanent pillars will be used to control subsidence. See the Upper Thompson Mine Pre-Subsidence Control plan attached in [Part III-H](#) for the proposed projections of the areas to be mined.

Coal will be transported to the outside during the initial re-habilitation phases using shuttle cars until a belt line is installed to transport the coal to the outside. A ventilation fan will be installed in one entry to provide fresh air to the working faces. The run of mine coal will be belted to the existing prep plant coal stockpile to be processed.

3. Attach a narrative explaining the construction modification, use, maintenance, and removal of the following facilities: (780.11)

(a) Coal removal, handling, storage, cleaning and transportation structures and facilities;

Revision R-5 proposes to add a conveyor belt line for the transportation of coal from the proposed Thompson underground mine to the existing prep plant. Additional railroad spurs are proposed to be added on both the northern and southern ends of the permit that attach to the existing railroad, which will better facilitate the transport of coal from the mine.

(b) Spoil, coal mine waste and non-coal mine waste removal, handling, storage, transportation and disposal structures and facilities;

See Attachement III-A-3 and original permit.

(c) Mine facilities; and

Revision R-5 proposes to add an existing power transmission line and substation that runs from the substation to the already permitted mine site. This line provides power for the mine facilities. No new disturbance is proposed due to the transmission line and substation already being existing. In the event repair work is necessary along the transmission line or at the substation, silt fences will be constructed along downhill areas to control erosion until repairs are completed.

This transmission line and substation will be used for the life of the mine. Once the mine closes the transmission line will be removed. Any poles, guy wires and lines will be removed from the site. Any areas disturbed will be seeded and mulched.

(d) Water pollution control facilities.

See Part III-B-2(a) of this revision.

5. Describe measures to be taken to ensure that all debris, acid-forming and toxic-forming materials and materials constituting a fire hazard are disposed of in accordance with 816.89 and 816.103; include contingency plans to prevent sustained combustion of such material. (780.18).

At this mine site, if acid or toxic forming material is encountered, it will be buried in the final pit or face up area, a minimum of ten (10') feet away from the highwall, a minimum of ten (10') feet up from the pit floor, and a minimum of fifty (50') feet away from a major drain. This acid or toxic forming material will be covered with a minimum of four (4') feet of the best available non-acid, non-toxic and non-combustible forming material.

For areas such as coal stockpiles, the following measures will be performed: After all coal is removed and the coal stockpile is no longer needed the base material will be removed and placed in the final pit or face up area, a minimum of ten (10') feet away from the highwall, a minimum of ten (10') feet up from the pit floor, and a minimum of fifty (50') feet away from a major drain. This acid or toxic forming material will be covered with a minimum of four (4') feet of the best available non-acid, non-toxic and non-combustible forming material.

Any material such as oil, grease, rags etc. that may present a fire hazard will be properly disposed of in an approved landfill.

Any non-coal waste will be disposed of at approved off-site landfills which meet all applicable local, state and federal requirements.

**SPOIL, COAL MINE WASTE AND NON-COAL MINE
WASTE REMOVAL, HANDLING, STORAGE, TRANSPORTATION
AND DISPOSAL STRUCTURES AND FACILITIES**

Revision R-5 proposes to add Coarse Refuse Disposal Area No. 5 for material produced from the proposed Upper Thompson underground mine.

Coal Mine Waste (Coarse Refuse Disposal No. 5)

Plans for disposal of coarse refuse generated from the operation of the preparation plant consist of the following: Coarse refuse will be belted to proposed Coarse Refuse Disposal Area No. 5 and placed in accordance with the approved design plans.

The proposed Coarse Refuse Disposal Area No. 5 will be cleared of all vegetation and organic material. This area has been previously surface mined. No topsoil exists. Spoil shall be saved in stockpiles and revegetated for redistribution following the completion of Coarse Refuse Pile No. 1.

The fill material (coal processing waste) will be placed in a maximum of two (2) foot horizontal lifts and compacted to a minimum of ninety (90) percent of maximum dry density. Compaction will be accomplished using rubber tired or tracked equipment that is available at the site.

The proposed fill will be inspected regularly during construction by a qualified registered professional engineer or other qualified specialist under the direct supervision of the qualified registered professional engineer.

Inspections of the fill will be made at least quarterly throughout construction and during the following critical construction periods: (a) during removal of all organic material, and non-competent material, (b) during removal of topsoil material, (c) during the placement and compaction of the fill material, (d) during the removal and reclamation of the proposed fill, (e) topsoil replacement and revegetation.

A report, certified by a qualified registered professional engineer, will be submitted to the Alabama Surface Mining Commission within two weeks after each quarterly inspection stating that the fill has been constructed and maintained in accordance with the approved plan. A copy of the inspection forms and certified report will be retained at the mine office.

If any examination or inspection discloses that a potential hazard exists, the Regulatory Authority will be informed promptly of the finding and of the emergency procedures formulated for public protection and remedial action.

Upon final placement of the fill material, the site will have been graded to conform to the slope requirements of the approved plans. The final slopes of the fill will be graded so as no portion will exceed that which is required to attain a minimum static safety factor of 1.5 to assure stability.

Testing of the coarse refuse will be performed to determine the acid-base account for lime amounts required prior to final covering. The lime will then be disc into the final lift of coarse refuse material. Upon completion of liming, the final limed coarse refuse surface will be covered with a minimum of four (4) feet (approved cover material) of the best available non-toxic, noncombustible and non-acid forming material and reclaimed and revegetated in accordance with the approved reclamation plan.

The final configuration of the fill areas will blend with the adjacent areas and will be suitable for the post mining land use of undeveloped land.

6. Give a description, including appropriate cross-sections and maps, of measures to be used to seal or manage mine openings, bore holes, wells and other openings within the proposed permit area. (780.18, 816.13-816.15)

Mine openings within the permit area (other than blast holes) will be eliminated in the following methods:

- 1) Exploration Holes - Exploration holes will be backfilled with the drill cuttings and capped with two (2) feet of clay.

[SEE ATTACHMENT III-A-6-1](#)

- 2) Monitoring Wells - Groundwater monitoring wells will be cased using PVC pipe of equal diameter of the drilling bit used. This casing will extend a minimum depth equal to the depth necessary to reach competent rock material to prevent filling of the well. The casing depth may vary depending upon the depth of the aquifer being targeted for monitoring. Groundwater monitoring wells may be temporarily sealed using a PVC cap of equal diameter as casing requires.

[SEE ATTACHMENT III-A-6-2](#)

Groundwater monitoring wells will be sealed at the time of abandonment with a concrete cap (2.0'x2.0'x.5').

[SEE ATTACHMENT III-A-6-2](#)

- 3) Mine Openings – See Item 4 below.

- 4) Final Sealing of Mine Opening Created by this Permit - After mining is complete at this mining operation, mine openings created by mining operation will be sealed in accordance with the requirements of the Mine Safety and Health Administration as follows:

Wet Opening Seals – A sufficient number of 6 inch diameter pipes will be inserted into the mine opening and covered with approximately 12 inches of soil material along the outside of the opening. The covering of the pipes is necessary to prevent crushing of the pipes by equipment during the sealing operations. A distance of approximately 3 feet from the entrance of the opening will be left for the construction of the concrete block or poured wall. A 12-inch thick reinforced concrete block wall or a carpenter formed, reinforced concrete wall will be constructed within the opening. If the wall is constructed of 12 inch block, concrete will be used as filler in each cell of the block and around the perimeter of the wall. This is done in an effort to ensure a water tight seal of the wall. Upon the completion of construction of the wall, earthen material will be used to backfill the opening to a minimum of 5 feet above the top of the opening. All backfill material will be an impervious, noncombustible, clay material compacted to provide an impervious seal. This clay wedge will be sloped to a slope no steeper than 2 horizontal to 1 vertical.

Upon the completion of the initial backfilling operation, the pipes will be permanently plugged to prevent seepage. The remaining face-up highwall will be backfilled and eliminated at this point. All disturbed areas will be fertilized, seeded and mulched in accordance with the approved reclamation plan of this permit application.

Dry Opening Seals - If the mine openings have been observed and documented as being dry, the exact same sealing procedures will be followed as outlined above with the omission of the 6 inch drain pipes.

[SEE ATTACHMENT III-A-6-4](#)

B. Engineering Plans.

All cross sections, maps and plans related to operations, reclamation and structures must comply with Section 780.10. Plans, appropriate calculation and conclusions shall be presented in a clear and logical sequence and shall take into account all applicable factors necessary to evaluate the proposed plan or design.

1. Existing Structures. (780.12, 786.21)

- (a) Describe each existing structure to be used, its location, current condition, approximate dates of construction and evidence (including relevant monitoring data) showing whether or not the structure meets the performance standards of Subchapter K or Subchapter B, whichever is more stringent and demonstrate whether or not the use of existing structures will pose a significant harm to the environment or public health or safety.

Not Applicable

- (b) If an existing structure requires modification or reconstruction to meet the performance standards, attach a compliance plan which includes design specifications, construction schedule, monitoring procedures, and evidence that the risk of harm to the environment or public health or safety is not significant during modification or reconstruction.

See Attachment III-B-2(a).

2. Ponds, impoundments, banks, dams and embankments. (780.25)

- (a) Submit a general plan which complies with Section 780.25 (a)(1) for each proposed sedimentation pond, water impoundment, and coal processing waste bank, dam or embankment to be located within the proposed permit area.

See Attachment III-B-2(a).

- (b) Submit detailed design plans which comply with Sections 780.25(a)(2)(3) and 816.46, for each sedimentation pond to be constructed on the increment you currently propose to mine. If the sediment pond is to remain as a permanent water impoundment, design plans shall also comply with Section 816.49.

See Attachment III-B-2(a).

- (c) Submit detailed design plans which comply with Sections 780.25(a) (2&3) and 816.49, for each temporary or permanent water impoundment to be constructed on the increment you currently propose to mine.

See Attachment III-B-2(a).

- (d) Submit detailed design plans, which comply with Section 780.25(a) (2&3) and 816.81-816.85, for coal mine waste bank to be constructed on the increment you currently propose to mine.

None Proposed

- (e) Submit detailed plans which comply with Sections 780.25 (a)(2&3) and 816.91-816.93 for each coal mine waste dam and embankment to be constructed on the increment which you currently propose to mine.

None Proposed

GENERAL ENGINEERING PLAN CERTIFICATION STATEMENT

I, Bradley K. Simmons, a registered professional engineer, hereby certify that the information, cross-sections, data, maps, etc., contained in this general plan in Attachment III-B-2-A is true and correct to the best of my knowledge and belief.

McGehee Engineering Corp.
Bradley K. Simmons, P.E.
Alabama Reg. No. 33277

Date

ADDENDUM TO THE GENERAL PLAN

This addendum to the general plan consists of addressing the addition of 15 disturbed acres for railroad spur and borrow area being added within the drainage area of existing Sediment Basin 015. The addendum also consists of addressing the additional 43 disturbed acres for the Upper Thompson underground mining, borrow areas, and Coarse Refuse Disposal Area No. 5 being added within the drainage area of existing Sediment Basin 018 and 018A. Modification Plans for Sediment Basin 018 and 018A are being submitted.

SEDIMENT BASIN 015

Basin 015 was originally designed for a watershed of 135.48 acres. With updated mapping it was determined that currently, Basin 015 has a watershed of 157.7 acres. This revision adds additional disturbed area that will drain to the basin. A modification to the approved design plans is submitted. Modifications will include the raising of the sediment level, reconstruction of the control section of the spillway, narrowing the spillway, installing a fixed siphon tube and raising the embankment less than a foot, in some areas, to retain the required freeboard.

See the attached [Modification Plans for Sediment Basin 015](#).

SEDIMENT BASIN 018 AND 018A

Sediment Basin 018 and 018A were redesigned for an adjacent permit, Jesse Creek Mining, LLC, P-3978, Gurnee Mine due to additional disturbance created by that mine by surface mining. Those plans were submitted with that application. It was required by the ASMC that once a revision was submitted to P-3887, those plans would be submitted to give the modified plans for 018A. No changes were required to Sediment Basin 018. Therefore, those plans are submitted as a part of this revision. See [design plans](#) submitted with the Jesse Creek Mining, LLC, Gurnee Mine, P-3978 for the modification of Sediment Basin 018A and the re-evaluation of Sediment Basin 018.

Due to the addition of the Upper Thompson Underground Mine and Coarse Refuse Disposal Area No. 5 a re-evaluation for these basins was performed. This re-evaluation proposes the Upper Thompson Underground Mine area, Coarse Refuse Disposal Area No. 5 and a large portion of the Atkins surface mining pit as active for coarse refuse disposal. The area proposed for surface mining for P-3978 is shown as mined and reclaimed to the post mine land use of forest. This is a valid assumption due to extended amount of production from the underground mines necessary to produce the quantities of refuse to cover those areas proposed. Any surface mining activities proposed will have been completed years before.

This is also supported by the extent of mining previously conducted in the Coke Mine and the minimal amount of area encompassed by the current coarse refuse facility.

This re-evaluation shows that the sediment basins as designed in the plans submitted will provide adequate treatment for the runoff during the life of the mine.

Attached below are the results of the re-evaluation performed and the SEDCAD computer outputs.

RE-EVALUATION RESULTS

SEDIMENT BASIN 018	PEAK ELEV. 10 YR, 24 HR EVENT	PEAK ELEV. 25 YR, 6 HR. EVENT	PEAK SETTLEABLE SOLIDS CONC. (ml/l)	TOP OF DAM CONSTRUCTED ELEVATION
MODIFICTION PLANS SUBMITTED	383.77	383.78	0.49	385
RE- EVALUATION	383.8	383.87	0.40	385

SEDIMENT BASIN 018A	PEAK ELEV. 10 YR, 24 HR EVENT	PEAK ELEV. 25 YR, 6 HR. EVENT	PEAK SETTLEABLE SOLIDS CONC. (ml/l)	TOP OF DAM CONSTRUCTED ELEVATION
MODIFICTION PLANS SUBMITTED	415.4	415.69	NA	417.8
RE- EVALUATION	415.31	415.7	NA	417.8

See attached [SEDCAD computer outputs](#) and [Basin 018 -018A Re-Evaluation Watershed Map](#).

GENERAL DESIGN DATA

SEDIMENT BASIN	LOCATION	DRAINAGE AREA ACRES
015	SW/NW, SEC. 21, T21S, R4W	157
018	NE/NW, SEC. 29, T21S, R4W	561.3
018A	NW/NE, SW/NE, Section 29, T21S, R4W	403.2

See [Watershed Map](#).

All basins are located in Shelby County, Alabama on the Pea Ridge Quadrangle.

5. Transportation Facilities (780.33, 780.37)

Revision R-5 proposes to add Primary Road No. 2. See attached [Primary Road No. 2 Detail Design Plans](#). See attached [Road Map](#).

- (a) Describe the measures to be taken to ensure the interest of the public and landowners affected are protected if disturbance within 100 feet of the right-of-way or relocation of a public road is proposed.
- (1) Appropriate warning signs will be posted along the road right-of-way a minimum of five (500') hundred from the entrance of the proposed disturbance.
 - (2) Appropriate advertisements, informing the public and affected landowners, will be run in the local newspaper prior to any disturbance within the one hundred (100') feet setback of or the relocation of any public road right-of-way.
 - (3) All safety requirements of the appropriate Federal, State, County, or Local governments, concerning public health and safety, will be followed.
 - (4) In areas where disturbance is proposed within one hundred (100') feet of the road right-of-way, earthen berms, guard rails, or barricades will be constructed as necessary to prevent accidental entrance into the mine area and to prevent safety hazards.
- (b) Describe any unique design, feature, or structure which is necessary for the road to meet the performance standards of Subchapter K using any necessary maps, plans, or cross-sections.
- (c) Describe, in detail, the measures to be taken during construction, maintenance and use of the transportation facilities to prevent damage to fish and wildlife and their habitat; public and private property; and erosion, siltation, and pollution of water.

Silt fences, hay filter dams, dust control on roads, vegetation, diversion ditches and other prudent practices will be utilized in controlling runoff. Cut and fill slopes created by road construction shall be grassed to insure stabilization and prevent erosion.

**DESIGN, CONSTRUCTION, MAINTENANCE, AND
RECLAMATION SPECIFICATIONS FOR PRIMARY ROADS**

1. LOCATION

- A) Primary roads will be located on ridges or high areas or on the most stable available slopes so as to control and prevent erosion, siltation, flooding, and adverse impacts to fish and wildlife, or their habitat and related environmental values, to the extent possible.
- B) No part of any primary road will be located in the channel of an intermittent or perennial stream without written approval from the Regulatory Authority, in accordance with 880-X-10C-.12 through 880-X-10C-.14 and 880-X-10C-.28.
- C) If at all possible, all primary roads will be located upstream of sediment basins to prevent, control and minimize additional contributions of suspended solids to stream flow or runoff outside the permit area, the violation of applicable State or Federal water quality standards, seriously altering the normal flow of water in stream-beds or drainage channels, and damage to all public or private property.
- D) In instances where it is not possible to locate primary roads in the above manner, sediment control will be achieved by the use of silt fences, rock check dams, hay bale berms, etc.

2. DESIGN REQUIREMENTS

- A) Primary roads will be designed by or under the direct supervision of a qualified registered Professional Engineer experienced in the design and construction of roads, in accordance with the ASMC rules and regulations, and current, prudent engineering practices. No Primary Road grade will be steeper than seventeen (17) percent.
- B) All primary roadway embankments will be designed and constructed to be stable under normal construction and operating conditions, with a minimum static safety factor of 1.3.
- C) All primary roads will be designed, constructed, reconstructed and maintained to have adequate drainage control structures to safely pass the peak runoff anticipated from a 10 year, 6 hour precipitation event.

3. CONSTRUCTION REQUIREMENTS

- A) The foundation area of the roadbed will be cleared and grubbed of all organic material and the topsoil will be removed. The disturbed area will be kept to the minimum necessary to accommodate the roadbed and/or associated drainage ditch construction.
- B) The road construction material will be suitable subgrade material, free of sod, roots, stumps, etc., and will not contain rocks which exceed twelve (12) inches in diameter. The road construction material will be placed in layers (12 inch maximum thickness) and compacted to ninety five (95%) percent of the standard proctor density, as set forth in ASTM.
- C) The minimum top width of primary roads will under no circumstance be less than sixteen (16) feet and will be of maximum width necessary to facilitate the largest equipment using the road.
- D) All slopes (cut and fill) will be no steeper than 2 horizontal to 1 vertical, unless specified otherwise in the detailed design.
- E) Roadbeds will be cut into consolidated, non-erodible material or will be surfaced with durable, non-toxic, non-acid forming material. In most instances, durable sandstone overburden material from the mine site will be used for surfacing material. In instances where durable sandstone overburden material from the site is not available or suitable, then durable, non-toxic, non-acid forming material, such as chert, crushed limestone, redrock, and/or crushed sandstone will be hauled in from off site, placed and compacted on the roadbed surface a minimum depth of four (4) inches.
- F) Primary roads will be constructed with grades as shown on the Detailed Primary Road Design Plans. No Primary Road grade will be steeper than seventeen (17) percent.

4. DRAINAGE AND SEDIMENT CONTROL REQUIREMENTS

- A) Primary roads will be constructed, reconstructed, and maintained to have adequate drainage control, using structures such as, but not limited to bridges, culverts, drainage pipes, ditches, cross drains, and ditch relief drains designed to safely pass the peak runoff anticipated from a 10 year, 6 hour precipitation event. All drainage control structures will be designed and constructed in such a manner whereas, to allow a free and operating conditions to prevent, control, and minimize erosion at the inlets and outlets.
- B) Culverts and drainage pipes will be designed and installed to provide adequate support for the load of the largest equipment using the road. For design purposes, "H-20" (live load + impact) was used. All culverts or drainage pipes with diameters of forty-eight (48) inches or less will be covered with a minimum of one (1) foot and the maximum cover will not exceed fifty-seven (57) feet of desirable compacted material. All culverts or drainage pipes with diameters greater than forty- eight (48) inches will be covered with a minimum of two (2) feet and the maximum cover will not exceed forty-one (41) feet of desirable compacted material. See Detailed Primary Road Design Plans for actual depth of material proposed above each culvert or drainage pipe.
- C) Culverts and drainage pipes will be designed and installed to allow adequate freeboard to prevent overtopping of the embankment.
- D) Drainage ditches, cross drains, and ditch relief drains will be constructed and maintained to prevent uncontrolled surface drainage over the road surface and roadway embankment.
- E) Drainage ditches will be constructed with no sustained grades greater than five (5%) percent, unless unavoidable. If ditches must be constructed with grades in excess of five (5%) percent, drainage ditches will be lined as shown on the Primary Road Detailed Design Plans.
- F) Sediment control will be achieved by the use of silt fences, rock check dams, hay bale berms, etc. in strategic locations, to prevent excessive siltation to the receiving streams.
- G) Upon completion of construction of all roads, the side slopes of the roadway cut and fill sections, including all borrow areas formed in the construction, areas used for disposal of excess material, ditches, etc. will be seeded with a mixture of perennial and annual grasses, fertilized and mulched to prevent erosion and ensure restabilization. Grass mixtures will include, but not be limited to, fescue, bermuda, rye grass, browntop millet, clover and sericea.

5. INSPECTION AND MAINTENANCE REQUIREMENTS

- A) Routine inspections and maintenance (such as regrading, resurfacing, maintenance of sediment control structures, spot replanting, and dust control) will be conducted regularly during the life of each road to assure that each road continually meets design and performance standards.
- B) Dust control will be achieved by the periodic application of water, chemical binders and/or other dust suppressants.
- C) Any road damaged by a catastrophic event, such as a flood, or earthquake, will be repaired as soon as it is practicable after the damage has occurred.

6. CERTIFICATION REQUIREMENTS

- A) Primary roads will be designed by or under the direct supervision of a qualified registered Professional Engineer experienced in the design and construction of roads, in accordance with the ASMC rules and regulations, and current, prudent engineering practices. Each design will be certified by a registered Professional Engineer as being designed in accordance with the Regulations of the Alabama Surface Mining Commission, Chapter 880-X-10.
- B) Upon the completion of the construction of each section of the primary road, as set forth in the detailed design plans, the construction will be certified by a registered Professional Engineer, to the Alabama Surface Mining Commission, as being constructed in accordance with the approved detailed design plans.
- C) In the event that a primary road is mined through in the mining process and must be reconstructed, the newly constructed primary road will be reconstructed to the minimum design criteria within the detailed design plans and the construction will be certified by a registered Professional Engineer, to the Alabama Surface Mining Commission, as being constructed in accordance with the approved detailed design plans.

7. REMOVAL AND RECLAMATION REQUIREMENTS

- A) All primary roads which are not mined through and remain after the completion of mining may be left as permanent roads for landowner access, if there is no opposition by said landowner.
- B) All primary roads which are not mined through and remain after the completion of mining which are not to be retained as permanent for landowner access will be removed and reclaimed in accordance with the approved grading and reclamation plans as soon as practicable after it is no longer needed for mining and reclamation purposes. This removal and reclamation will include:
 - 1. Closing the road to traffic;
 - 2. Removing all bridges, culverts, drainage pipes, and other drainage control structures, unless otherwise approved as part of the post mining land use;
 - 3. Removing and/or otherwise disposing of road surfacing materials, that are not compatible with the post mining land use and revegetation requirements, onsite or removed and stored for re-use;
 - 4. Reshaping and regrading cut and fill slopes as necessary to be compatible with the post mining land use and to compliment the natural drainage pattern of the surrounding terrain;
 - 5. Protecting the natural drainage patterns by installing dikes or cross drains as necessary to control surface runoff and erosion;
 - 6. Scarifying or ripping the roadbed, replacing topsoil or substitute material, and revegetating the entire disturbed area in accordance with the approved reclamation plan.

8. TYPICAL ROADBED CONFIGURATION

- A) See original permit for [typical primary road drawing](#) for an illustration of the typical roadbed configurations.